

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

PUBLICATION NUMBER : 2000082494  
PUBLICATION DATE : 21-03-00

APPLICATION DATE : 03-09-98  
APPLICATION NUMBER : 10267274

APPLICANT : SANYO CHEM IND LTD;

INVENTOR : NAKANO TOMOHARU;

INT.CL. : H01M 10/40 C08L 25/02 C08L 31/02 C08L 33/14

TITLE : FLAME-RESISTANT NONAQUEOUS ELECTROLYTE AND SECONDARY BATTERY  
USING THE SAME

ABSTRACT : PROBLEM TO BE SOLVED: To improve flame resistance without deteriorating battery characteristics by forming an electrolyte with an oligomer or polymer (A) having a Li salt of sulfonylimide as a side chain and an oligomer or a polymer (B) having an imidazolium salt of sulfonylimide as a side chain.

SOLUTION: A component A has a very high degree of ion dissociation and superior Li ion conductivity. Its weight average molecular weight is preferably 500-100,000. A component B is a liquid molten salt at a temperature equal to or above -20°C, and has flame resistance, so that it can impart flame resistance to the electrolyte without deteriorating electrolyte characteristics or battery characteristics even at low temperatures. Its weight average molecular weight is preferably 1,000-100,000. The content of the component A is preferably 0.1-3.0 mol/l as Li ion concentration. The content of the component B is preferably 10-90 wt.%.

COPYRIGHT: (C)2000,JPO